

MULTIPLY SUBROUTINE.

CALLING SEQUENCE

```
MOV R2 # MULTIPLIER      PARAMETER 1
MOV A # MCAND             PARAMETER 2
CALL MULT.
```

MULTIPLIES $A \times R2$ WITH PRODUCT IN A, & R2 ($A = H0, R2 = L0$)
USES A, R2, R3, R7
REGISTER MODIFIED A, R2, R3, R7

```
MULT : MOV R7, A           ; MCAND IN R7
MOV MOV R3 # 9           ; REQUIRES 9 SHIFTS
      CLR A                ; INITIALSE PRODUCT
      CLR C                ; ZERO FILL ON SHIFT
LOOP  RRC A                ; SHIFT PARTIAL PRODUCT
      XCH A, R2             ; XCH MULTIPLIER PROD
      RRC A                ; LSB IN CY
      XCH A, R2             ; SHIFTED MULTIPLIER IN R2
      JNC NOADD            ; NOADD IF LSB = 0
      ADD A, R7             ; PROD = PROD + MCAND
NOADD DJNZ R3, LOOP        ;
      RET                  ;
```

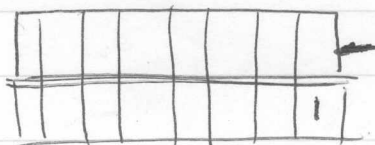
0001 0000

0000 0011

R7 ← 10

03 01

R2 01



00010000